SCIENCE & GOVERNMENT REPORT

11th Year of Publication

The Independent Bulletin of Science Policy

Volume XI, Number 17 | P.O. Box 6226A, Washington, D.C. 20015 | October 15, 1981

Grant Swinger: Thriving Amid Budget Cuts

The following is part of an occasional series of interviews with Grant Swinger, Director of the Center for the Absorption of Federal Funds:

●

Q. How is the Reagan Administration's budget-cutting affecting your activities?

A. We've recognized that adaptation is the key. For example, we've revived an old activity that we had to mothball during the Carter Administration.

Q. What's that?

A. The Institute for the Resolution of Conflict Through Violence. That was a big one during the '50s and '60s, and now it's back again with big bucks from the Pentagon as part of Project Strongarm.

Q. Project Strongarm?

NIH May Experiment With New Grant System—Page 2

A. It's part of the new program called Alternatives to Negotiations. I can't tell you too much about it, but I'd like to point out that there's life in some of the old stuff, too. Like strategic studies. You know, if we do this and the Russians do that, and then we do this or that, what if they...And on and on. We thought it was played out, but we saw that the Russian angle is indispensable these days. We learned that the hard way.

Q. How?

A. When we struck out with our proposal for an oil-solidification project.

Q. Oil-solidification?

A. Remember how it was with Carter? Anything went in energy. They went bonkers with coal-liquefaction. So, we figured we'd take the next step. But, like I said, no Russian angle, so we dumped it and regrouped around MX.

Q. Isn't that resolved?

A. Oh, no, that's really just beginning. This latest decision is going to produce new panels, commissions, conferences, seminars, reports. It's open-ended, even though there's nothing new to be said. But even if we don't get another contract or grant on MX, we can't complain. We had five good years on trucks versus trains, midget subs, airplanes, shelters in the desert, and then, of course, all kinds of combinations of them. We were putting in overtime, and then just when it looked like the end was in sight, one of our bright fellows came up with a blockbuster of an idea that brought another load of loot from the Pentagon.

Q. What was that?

A. He raised the possibility of doing nothing—no MX, so nothing to hide. That was there all along, but it takes a special kind of mind to spot it in all the policy clutter. So, we went back to the beginning and studied doing nothing. We started with a big conference, broke up into workshops, and soon we'll have panel reports to send out for review, prior to reconvening the conference. We're going to do the same thing with the B-1, battleships, rapid deployment, the draft,chemical warfare, and AWACS. It's a new dimension in policy studies.

Q. What else?

A. Japan. That's shaping up as a big one. When you get the Reagan crowd to take its mind off the Russians,

(Continued on page 2)

In Brief

Continuity may be in order for the ill-will that prevailed between the Carter White House science office and the House Science and Technology Committee. Reagan Science Adviser George A. Keyworth, scheduled to testify before the full Committee September 7 on engineering manpower, cancelled at the last minute, pleading a heavy workload. Keyworth didn't offer to send a substitute—the usual courtesy in such circumstances—but offered a bland written statement.

So far, no public response from the Committee, some of whose members and staffers feel they're in for a replay of the rough times they had getting the attention of the science office in the last Administration.

Failure to show up spared Keyworth from an embarrassing grilling on the disparity between his own publicly expressed concerns about lagging federal support for research and related educational activities and his boss's insistence on still more budget cuts.

What will happen to the Department of Energy's multi-billion-dollar research activities if, as Reagan insists, the Department is abolished? No official word on that, but Congressional aides say the most likely outcome is creation of a free-standing agency—NASA style—that would encompass DOE's present activities in physics, fusion, and nuclear research.

NIH Eyes Tryout for "Fixed-Obligation" Grant

A step toward the establishment of a new legal instrument for research support was taken last week when the Director's Advisory Committee (DAC) of the National Institutes of Health endorsed a proposal to develop a plan for a limited trial of "fixed-obligation grants."

The idea is to cut the paperwork burden for scientists and their administrators by substituting what's referred to as scientific accountability for the present system of justifying the use of every last grant dollar.

At present, most university research is funded on a cost-reimbursement principle, which means that after the topic and scope of a research project are accepted, the supporting agency agrees to pay all direct and indirect costs associated with the research—provided that these are adequately documented.

Fixed-obligation grants (stuck with the unfortunate acronym of FOGs) would shift the basis of research awards, so that the size of the grant would be established at the beginning. It would then be up to the individual scientist and his or her institution to decide how to make the best use of the funds available. The demands for strict fiscal accountability would be considerably reduced; in their place would be a greater emphasis on scientific accountability, i.e., on demonstrating that successful research had been carried out with the funds made available.

The shift to fixed-obligation grants is one of a series of proposals that has been developed by a subcommittee of the DAC chaired by Samuel O. Thier, Professor of Medicine at Yale Medical School, and William Raub, Associate Director for Extramural Research and Training at NIH. The subcommittee was set up earlier this year by then-NIH-Director Donald Fredrickson to look at ways in which the general costs of biomedical research could be reduced—a move designed partly to prepare NIH for the budget stringencies now being experienced.

The subcommittee's report also contains a number of other proposals that were endorsed by the full committee at their October 2 meeting in Bethesda. One, for example, concerns extensions to the institutional prior-approval system. Many institutions are permitted to make several types of decisions about grants on their own without consulting NIH, such as transferring funds between the personnel and supplies categories, or rebudgeting funds for domestic travel or special-purpose equipment. Here the committee recommended that the category of costs that could be dealt with in this way should be enlarged to cover, for example, pre-award costs and general-purpose equipment.

Another recommendation made to the NIH was that it should study various modifications in the handling of grant operations. Among them were greater flexibility in the period of grant awards, speeding up the review of grants up to about $35,000, and identifying those projects which, though scientifically distinct, are closely related and between which cost transfers might be authorized in advance.

Each of these proposals is now being studied by NIH

(Continued on page 3)

SWINGER *(Continued from page 1)*

you can get them to worry about Japan. We're hitching that to genetic engineering, and we're working on a pony-size chicken. We call it Mega-Chicken. We've got to beat the Japanese to it. We're also into 'quality circles,' whatever they are, but clearly they're hot.

Q. Other activities at the Center?

A. Things come and go. Remember civil defense? It was thriving for a long time, but then the bottom dropped out. The same with pollution, ecology, population control, oceanography, and on and on.

Q. Any mileage left in the social sciences?

A. We used to do very well with poverty, but there's not much in that now. We're under contract to the school lunch program to study how little you can feed kids before malnutrition hits. We're trying to get this tied in with a sludge-conversion project, but the Reagan people tend to be slow in approving these things. Unless, as I said, there's a Russian angle.

Q. Then it looks as though these are very different times for your organization.

A. Not as much as you might think. Actually, there's more money floating around then ever before for our kind of work, but you've got to be able to pitch your case to the politics of the moment.

Q. Do you think you'll ever run out of grantable subjects?

A. Not likely. Right now, in fact, I'm preparing for two new conferences.

Q. On what?

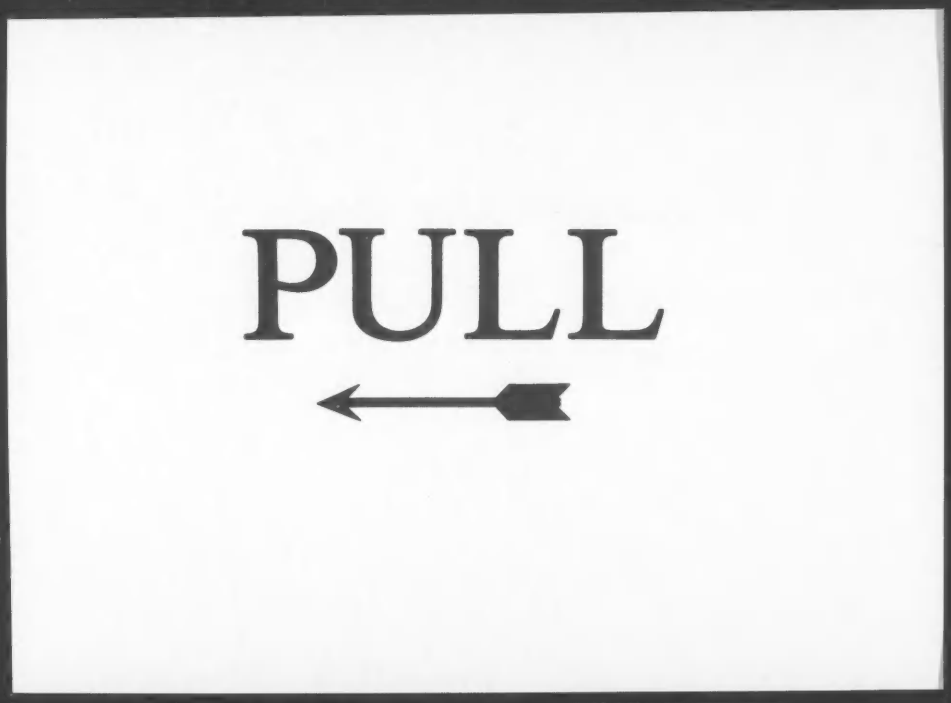
A. One's on technological lag and the other is on terrorism. Like the man said, it's an endless frontier.

Q. Thank you, Dr. Swinger.—DSG

Swinger Collection Coming

Classics from the Grant Swinger series, dating back to the 1960s, will be published next month by SGR in a booklet titled "The Grant Swinger Papers." Copies, at $3.95 each, may be ordered from: SGR, PO Box 6226, Washington, DC 20015.

SGR often gets attached to some very long routing slips. Why not speed up delivery by obtaining another subscription? Just fill out and return the attached prepaid card. We'll send you as a gift a free copy of Daniel S. Greenberg's book, *The Politics of Pure Science,* plus the SGR *International Almanac*—1978-79, containing original reviews of science-policy developments in over 30 nations (368 pages, originally published at $54.00).


PULL

. . . Peer-Review System Would be Retained

(Continued from page 2)

administrators. However, it is the suggestion of a limited trial with the fixed-obligation grants that is expected to generate the largest amount of attention, since this represents a fundamental departure from the main way in which biomedical research has been funded in the post-war period.

Describing the shape of possible trial of such grants, Raub told members of the committee that the trial would have four separate elements:

- There would be no change in the present peer-review or award-selection processes, so as to ensure that research selected for funding was still chosen on the basis of scientific merit and pertinence.
- The trial would be limited to selected classes of awards, for example, activity circumscribed by a dollar cap (perhaps $100,000 for direct costs), or on the basis of a particular award mechanism, such as individual research project grants.
- The trial would, of necessity, be limited to those institutions which had already demonstrated an interest in such experimentation, and already had accounting systems considered adequate to detect obvious cases of fraud or abuse.
- The trial would be designed in such a way that accountability would be limited to technical reporting and assessment, except in rare cases where it was felt that closer financial auditing was necessary.

The idea of fixed-obligation grants, as opposed to cost-reimbursement schemes, was suggested by the National Council on Research in its report on *Funding Mechanisms: Balancing Objectives and Resources in University Research*, published in May 1980. In this report, the NCR (which went out of existence as soon as its five reports on university-government relationships had been completed) urged experimentation with grants-in-aid as an alternative to current procedures for making awards.

"This would be an award made in response to a normal research proposal including a detailed budget like the current NSF and NIH proposals, but with the accounting to the federal government limited to scientific reporting, and with the fiscal management delegated to the investigator and his institution," the report said. "The Commission believes that the incentives for wise management of resources which are inherent in the research funding system reduced the risk of fraud, abuse or inefficiency to a minimal level."

Linda Wilson, Associate Vice-Chancellor for Research at the University of Illinois, Urbana, and a member both of the NCR and the DAC subcommittee which draw up the recommendations for the full committee, said that although the ultimate goal of the fixed-

(Continued on page 4)

12-Percent Cut Faces R&D

The 12-percent budget reduction that most federal agencies have been directed to adopt for the current fiscal year would force several major R&D agencies to cut back sharply from the amount of research they supported in fiscal 1981, which ended September 30.

According to figures prepared by the Office of Management and Budget, the National Institutes of Health would receive $3.311 billion this year, compared to $3.5 billion in the year just ended. NIH funds for research training would drop from $176 million to $117 million.

The National Aeronautics and Space Administration was told to plan for only a six-percent cut, but that dispensation means little for the already slimmed-down space agency. The six percent translates to about $360 million, which means still further reductions in the NASA's sagging space-sciences programs. Likely to go is the Centaur booster for the Galileo Jupiter probe. And chances are now considered practically non-existent for restoration of the US role in the Solar Polar mission.

As for what's ahead for other research agencies: The word is that they're all working up plans for implementing the prescribed 12-percent cut, while hoping—and, in some cases quietly lobbying—for a Congressional rescue.

©Science & Government Report, Inc., 1981

ISSN 0048-9581

Editor and Publisher
Daniel S. Greenberg

Associate Publisher
Wanda J. Reif

Circulation Manager
Gail A. Gallessich

Contributing Correspondents
David Dickson, Kim A. McDonald (Washington); Francois Seguier (Paris); Ros Herman (London)

Independently published by *Science & Government Report*, Inc., twice monthly, except once in January, June & July. Annual Subscription: Institutions, $127.50 (two years, $220.00); individuals, $55.00 (two years, $95.00). Editorial offices at 3736 Kanawha St. N.W., Washington, DC 20015. Tel. (202) 244-4135. Second-class postage paid at Washington, DC. Please address all subscription correspondence to Box 6226A, Northwest Station, Washington, DC 20015. Reproduction without permission is prohibited. SGR is available on Xerox University Microfilms. Claims for missing back issues will be filled without charge if made within six months of publication date.

Here's How "Fixed-Obligation" Grants Would Work

What's a fixed-obligation grant and how does it differ from a conventional contract? Following is the explanation offered in the Interim Report of the Working Group on Costs of Biomedical Research, part of the NIH Director's Advisory Committee:

●

In its simplest form, the fixed-obligation grant would have many of the attributes of a fixed-price contract. Once the funding agency has made a tentative decision to make a particular award (e.g., the applicant having gone through the current application and peer-review procedures), the agency and the prospective performer would engage in pre-award negotiations to establish agreement on the following: (1) the objectives of the project, (2) the nature and frequency of the technical reports that the performer is to furnish the sponsor as evidence of progress, and (3) the amount and period of the award.

If these negotiations are successful, the sponsor would make the award without any requirements for the reporting of expenditures and without special conditions as to kind of records of expenditures and activity the performer is to maintain. The sponsor would rely exclusively upon the technical reports to assess whether the performer's accomplishments under the project constitute an acceptable return. Failure by the performer to achieve the mutually agreed-upon objectives would weigh negatively in the sponsor's consideration about future funding for that performer's activities, but would not require the withdrawal or return of funds already awarded—hence the name "fixed-obligation grant."

The fixed-obligation grant, as described above, would differ in two important ways from the fixed-price contract. First, the fixed-price contract is an acquisition or procurement relationship, whereas the fixed-obligation grant would be an assistance or support relationship. The fixed-price contract makes explicit provisions for one or more specific "deliverables." These are often particular objects or services in addition to technical information. By contrast, the fixed-obligation grant would almost invariably deal with general objectives rather than specific deliverables and would establish no acquisition requirements other than technical reports.

Second, the full amount of the agreed-upon award under a fixed-price contract is not released by the sponsor until it receives the deliverable(s) and judges it (them) acceptable. Depending upon the negotiated terms of the contract, the performer may or may not receive partial payments prior to completion of the project. The fixed-obligation grant, on the other hand, would make funds available to the former in advance of its efforts on the projects or as the work progresses. The funds would be obligated by the awarding unit either in a lump sum at the beginning of the performance period or in two or more successive prospective payments. The award could be handled via the letter-of-credit mechanism to assure due care for Federal cash flow.

FIXED GRANTS *(Continued from page 3)*

obligation grant was to help reduce the general level of overheads and indirect costs, "it is really designed as a second or third order change to reduce administrative costs and give research workers more flexibility."

Wilson said that considerable productivity was being lost because of attempts to monitor scientists too closely, and repeated several criticisms of the accounting requirements demanded by the Office of Management and Budget in its Circular A-21. "The fixed-obligation grant could make a contribution, even if there was no cost saving," she said. "Fiscal accountability is not going to disappear; it would still be appropriate for the federal government to audit the system, but this would be done very differently than on a grant-by-grant basis."

In earlier meetings of the subcommittee, Henry G. Kirschenmann Jr., Deputy Assistant Secretary for Grants and Procurement in the Department of Health and Human Services, pointed out that the OMB would have to be convinced that the funding agency would not be overpaying if the fixed-obligation grants was used.

An optimistic note was, however, struck by Kenneth Maclean, a legislative assistant to Senator William Proxmire (D-Wisc). He told subcommittee members that Congress was always on the look-out for any mechanism—such as the fixed-obligation grants—that might help to contain the rapidly escalating costs.

At the end of the DAC meeting, the committee endorsed the subcommittee's proposal for Raub to prepare a plan for a limited trial of the fixed-obligation grant, which will include a basis for its evaluation. The next step will obviously depend partly on who is appointed to fill the NIH directorship vacancy created by Fredrickson's resignation in July. But with the momentum building up for the implementation of some type of trial—as well as general enthusiasm in the research community for some of the advantages that the grant offers, such as the reduced need for time-and-effort reporting and the greater flexibility and incentives given to the investigator and institution for prudent scientific management of funds awarded—it seems highly likely that some experimental funding of this form will be introduced within the near future.—DD

Universities Protest Patent-Law Provision

Some of the big research universities are expressing reservations about a rule proposed by the Office of Management and Budget for implementing part of the patent-law amendments enacted last year. Their complaint is that OMB's way of doing things would, in effect, clog scientific communications by requiring academe to give granting agencies prior notice of scientific articles containing potentially patentable material.

The purpose of the patent-law changes is to speed the transfer of potentially commercial research findings from the laboratory to the marketplace. However, there have been strong objectives about a particular clause in the proposed regulations, published for comment in the *Federal Register* in July and due to appear in their final form by the end of the year. The clause would allow any federal agency to require data on any potentially patentable invention to be submitted to it at least three months prior to being offered to a scientific journal for publication.

Both the National Science Foundation and the National Institutes of Health have already indicated that they do not intend to take up this option, and will be quite happy if they are sent the information simultaneously with the submission for publication. But four big government agencies—the departments of Defense and Energy, the National Aeronautics and Space Administration and the Environmental Protection Agency—have already introduced such a rule into their research contracts. They did so on the basis that it can be altered retrospectively if OMB decides to change the regulation in the light of the many adverse comments that it has generated.

According to the OMB Bulletin 81-22, signed by Donald E. Sowle, Administrator of the Office of Federal Procurement Policy (OFPP), agencies favoring the requirement that they be notified prior to the submission of a manuscript for publication "indicate that it is necessary to assure protection of foreign patent rights, particularly when national security interests are involved." James Denny, Assistant General Counsel for Patents at the Department of Energy and Chairman of the interagency group which helped to draw up the proposed regulations, said last week that the reference to national security was "a mistake."

However, he insisted that some form of prior notification was necessary to protect patent rights in foreign countries where merely communicating research results to another individual prior to applying for a patent could make the application invalid.

Universities have reacted strongly—and with almost a single voice—against this provision. In a letter to Fred Dietrich, Associate Administrator of the OFPP, Donald Kennedy, President of Stanford University, complained that it could be a major obstacle to efficient communication in science. "This well-intentioned provision, which attempts to let a penalty [the loss of rights to a patent if the agency is not notified] serve as an incentive, is so unsuited to university research that, were it widely applied, the purposes of the patent reform act would be defeated and the university position with regard to patent rights and technology transfer would actually be much worse than before."

In a similar vein, Howard W. Bremer, patent counsel to the Wisconsin Alumni Research Foundation, says that in over 30 years of patent practice, including substantial foreign filing, he never encountered a rejection of a foreign application based upon a statutory bar being established solely by the submission of a manuscript for publication (as opposed to publication itself). He also said that he knew of no foreign patent law which states that the submission date of a manuscript *per se* established a statutory bar.

"The statement that the alternative clause 'is necessary to assure protection of foreign rights, particularly where national security interests are involved' is to anyone familiar with utilizing the patent system of the world, ridiculous," wrote Bremer. "Security connotes secrecy, whereas the filing of a patent application is synonymous with disclosure. The two are obviously not compatible, and no-one who was interested in preserving security, i.e., secrecy of a certain invention, would be foolish enough to file patent applications relating to it, and particularly not outside the United States where publication within 18 months of the filing date or priority date is assured."

OMB has indicated that it intends to convene a meeting of representatives and the agencies to work on the issues which have been raised by the pre-notification requirement, apparently introduced into the proposed regulations at the last moment by the departments of Energy and Defense. "The fact that they are calling such a meeting means that they are not yet ready to delete the clause, even though the public comments that they have received are overwhelmingly against it," says Milton Goldberg, Executive Director of the National Association of College and University Business Officers.

(Continued on page 6)

STATEMENT OF OWNERSHIP

Statement of ownership, management, and circulation of *Science & Government Report*, published 21 times per year at 3736 Kanawha St. NW., Washington, DC 20015; publisher and editor, Daniel S. Greenberg (same address); stockholders holding or owning one percent or more of stock, Daniel S. Greenberg (same address). Extent and nature of circulation: Average number of copies each issue during preceding 12 months/actual number of copies of a single issue published nearest to filing date (October 15, 1981); total number of copies printed, 1300/1300; paid circulation through dealers and carriers, street vendors and counter sales, 0/0; mail subscriptions, 944/934; free distribution by mail, carrier, or other means, 31/31; total distribution, 975/965; copies not distributed, 325/335; total, 1300/1300.

AF Says Engineers Lacking for R&D Buildup

While the Reagan Administration insists that the economy can take a blank-check defense buildup in stride, the Chief of the Air Force Systems Command has told Congress that his organization is seriously handicapped by a shortage of qualified engineers and "I see my problem about to get even worse."

That forecast came from General Robert T. Marsh, in testimony October 6 before the House Committee on Science and Technology.

"The proposed increases in President Reagan's defense budget will create an immediate demand for even more technically qualified people..."Marsh told the committee on the opening day of a two-day inquiry into engineering manpower. The hearing was in the oversight category, though lurking in the background were the heavy cuts in NSF budget for training programs.

"Since 1976," he continued, "we have seen our engineering resource base steadily erode to the point that now the Air Force as a whole is nearly 1100 Military Engineering Officers short of our minimum needs." His own command, he said, is short "over 500 engineers—or 10 percent. This shortage is particularly acute in the electrical, aeronautical, and aeronautical engineering disciplines which form the nucleus of our engineering force. Further," he testified, "the shortage also translates into an experience drain. During the last three years, Systems Command suffered a net loss of nearly 7500 man-years in military engineering experience. Unlike industry, we cannot hire middle and top management levels. We must 'grow our own'—and to date we simply have not been able to replace this experience."

What are the effects? Marsh cited the following:

- "One of our satellite programs recently suffered a technical problem which we believe could have been detected and corrected sooner and less expensively if only an experienced engineer had been available—estimated cost is seven million dollars.
- "An inexperienced officer allowed a conflict between associate contractors to linger longer than prudent. Impact—the delivery schedule slipped and the cost increased two million dollars.
- "Air Force Logistics Command (AFLC) has not been able to develop new, non-destructive inspection procedures for detection of fatigue damage in B-52 and A-7D aircraft. This has adversely affected the operational readiness of these aircraft.
- "AFLC attempted to contract out 264 Minuteman Missile circuit boards—no bids were received. The work had to be scheduled in-house, but, because of engineer shortages, the work will take three years versus the originally scheduled two years."

A Report from One Campus

The following is from testimony to the House Science and Technology Committee hearing on engineering manpower by Robert B. Gaither, President of the American Society of Mechanical Engineers and head of the Mechanical Engineering Department, University of Florida:

●

...let me convey to you the situation as it confronts me personally. My faculty is overloaded. We have a record enrollment. Six out of the twenty-six faculty positions in mechanical engineering at the University of Florida are vacant. That is approximately 20 percent of my faculty. I am encountering extreme difficulties in locating competent people willing to dedicate their lives to teaching mechanical engineering. A year ago I lost one of my best professors to industry. They simply doubled his salary. Added to this, I have an extreme shortage in space, office and laboratory equipment. I don't have sufficient funds to maintain the new equipment that has recently been donated to us.

NAS Appoints International Aide

Victor Rabinowitch, a staff member at the National Academy of Sciences since 1965, has been appointed head of the Academy's Commission on International Relations, succeeding W. Murray Todd, who left the NAS in July.

PATENTS *(Continued from page 5)*

Denny, at the Department of Energy, predicts that the offending clause "is likely to undergo some type of change." However, he suggests that it is considerably better than the previous regulation, which, *pro forma,* required across-the-board pre-publication review of all manuscripts, whether they contained potentially patentable discoveries or not. He also says that the Department remains concerned that, by submitting a manuscript for publication without the Department's prior approval, there are circumstances under European law in which all patent rights might be forfeited. "We are playing it safe," says Denny. "I think there will be some type of compromise. We are trying to make it possible to speed up the commercialization of research results without either throwing the rights away, or doing something which is completely unacceptable to the universities. There should be something in between."

SCIENCE & GOVERNMENT REPORT
P.O. Box 6226, Northwest Station
Washington, D.C. 20015

☐ Institutions: One year, $127.50
☐ Check enclosed ☐ Please bill
☐ Overseas Airmail (add $35.00)

Name _____

Address _____

_____ ZIP _____

D78

NO POSTAGE
NECESSARY IF
MAILED IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST CLASS Permit No. 10633 Washington, D.C. 20013

Postage will be paid by addressee:

SCIENCE & GOVERNMENT REPORT
P.O. Box 6226
Northwest Station
Washington, D.C. 20015

Britain: The Lords Probe Science Advice

London. The House of Lords' Select Committee on Science and Technology has been taking its turn at another of those periodic parliamentary inquiries into how the high political councils get advised on research-related matters. And, as in past encounters with this topic, the generally agreed upon answer is: not very well.

The recommended remedy, from many distinguished quarters, is prompt restoration of the post of Chief Scientific Adviser to the government, abolished in 1976. But, while that may be the answer, it's not quite clear what the question is, the reason being lack of evidence that things worked better when the post existed.

As the Lords were told by a parade of witnesses who provided a primer on the intricacies of science and government, the bulk of the money for research originates with the Department of Education and Science (DES), plus a number of mission-oriented ministries. And it gets to the lab through a number of disbursing organizations, such as the University Grants Committee and Britain's five discipline-oriented research councils. The councils, in turn, receive guidance from the Advisory Board for the Research Councils (ABRC). The chief scientist of each ministry is there to guide his organization's research spending, which goes to both government and academic laboratories, supposedly in accordance with the "customer-contractor" system, adopted in 1972 to promote "relevance" in research.

As their Lordships discovered when they talked to the leaders of many of the committees involved, senior scientists are dissatisfied with some aspects of the system. Most agreed that the research council system works well, perhaps because the DES money is given to the scientists and they are left to decide how to distribute it, with little interference from civil servants.

But in the ministries, scientific considerations form only part of a much wider spectrum of issues—political, economic and social—that may affect a particular decision. And it is civil servants who decide where to seek advice and what to do about it. Almost all the witnesses agreed that the level of scientific literacy among the recipients of such advice left much to be desired.

As Sir Alec Merrison, chairman of the ABRC pointed out, not all chief scientists are listened to. Their influence tends to decline even further, the Royal Society noted, when chief scientist posts are downgraded, as happened recently in the Ministry of Agriculture, Fisheries and Food.

The government machine also includes several committees where high-ranking and experienced scientists come together. There is the Advisory Council on Applied Research and Development (ACARD), which includes engineers and scientists from industry, universities and government. It reports directly to the Prime Minister, which looks good, but, in fact, gives it no leverage to implement its suggestions. The very cool government response to a recent report on biotechnology—which ACARD undertook with the Royal Society and the ABRC—has left a sour taste.

Merrison said that the ABRC is, because of its composition, "a very potent force" which could profitably advise outside its current limited role with the DES. But the Royal Society has a different view, namely, that the ABRC is so busy administering the research council budget that it is failing to advise properly on the broader aspects of the DES's responsibility for civil science. Lord Zuckerman, once a senior adviser to government himself, said that ABRC and ACARD could be combined into a central advisory council for science and technology—but only if it was "privy to confidential matters which it is mostly denied at the present time."

At a higher level—and therefore shrouded in mystery—is a committee of permanent secretaries and chief scientists which meets rarely and deals with matters of organization, personnel, and broader interdepartmental issues. And there may be or may not be—their Lordships were unable to determine the issue—a Cabinet committee on science. The Prime Minister—who studied chemistry at Oxford University—has said that she takes ultimate responsibility for science at the Cabinet level, but what this means, no one knows.

Independent of the ministerial hierachy is the Central Policy Review Staff (CPRS). This office is supposed to review the activities of the ministries and provide reports that go straight to the Cabinet. In the past the Cabinet Office has contained a high-ranking chief scientific adviser to the government, but more recently the job has been relegated to a junior level. The most consistent suggestion the Lords' committee heard was that the CPRS should elevate the job and provide the occupant with a substantial scientific staff.

The Lords are scheduled to publish their recommendations in early November. But the Prime Minister herself has hinted that radical changes in the system will not be tolerated. In the British context, that means nothing beyond cosmetic change—if that much.—RH

Perpich to Leave NIH for Industry

Joseph G. Perpich, right-hand man to NIH Director Donald Fredrickson from 1976 until Fredrickson's resignation in July, will leave NIH in December to become Vice President for Corporate Planning and Administration of the Genex Corporation, Rockville, Md. Perpich, who holds degrees in law and medicine (psychiatry), served as NIH's Associate Director for Program Planning and Evaluation.

Prune Out R&D Losers, Keyworth Tells Physicists

President Reagan's science adviser, George Keyworth, has not been slow to find a silver lining in the latest round of budget cuts. Addressing a meeting of the Department of Energy's High Energy Physics Advisory Panel on September 28, he said that the cuts provided a good opportunity to speed up the process of distinguishing between first- and second-rate research, which, he said, was the first step to a fitter—if leaner—scientific establishment.

"In my first public speech [at a June meeting organized by the American Association for the Advancement of Science] I said that the time had come to prioritize our support of science," he said. "That is more relevant today than it was three months ago."

Keyworth told the high-energy physicists that among the things which had to be protected were the top American research universities. "Anything that threatened the excellence of the top US academic and research institutions would be a disaster," he said. Picking up the theme that he had stressed at the AAAS meeting, he added that it would be necessary "to face up to realities and identify those areas of science which show particular promise."

It was now up to the scientific community, he continued, to select "the sciences that have the highest probability of a major breakthrough. It will have to be done across the sciences on an objective basis; we will have to identify the areas of science with poor pay-off for what they are."

Keyworth warned that the budget squeeze was not likely to be a short-lived affair, and that it would be unrealistic to count on a compensatory increase in 1984 to make up for the cuts in the 1982 and 1983 budgets.

"I cannot offer any great hopes except to say that I feel we can conform to budgetary pressures and keep American science at least as strong as it is today. But we will have to look at this dispassionately, perhaps even brutally. What bothers me is that if we have to go through the same exercise 5 years from now I think the impact would be disastrous."

Cuts could not be done across the board on a pro-rata basis, but on the basis of excellence alone, Keyworth said. "Rather than overreacting and claiming that the sky is falling, the best thing we can do is to help the Office of Management and Budget do its job as best it can."

Returning to a theme that he stated in June, the Director of the Office of Science and Technology Policy said he favors increasingly close scientific links with Western Europe and Japan. "We could, for example, select five areas in need of substantial funding, and agree that the US take two, Western Europe take two, and that Japan take one," he said. "This would not be a matter of dividing up the turf, but of addressing the problem as a joint responsibility." He added that "the leading scientists' perspective is going to have to go from something local to something global."

Science & Government Report
Northwest Station
Box 6226A
Washington, D.C. 20015

Second class postage paid at Washington, D.C.

9999

Xerox-University Microfilms
300 N. Zeeb Rd
Ann Arbor MI 48106